

separated from CO₂ is lighter than CO₂, i.e. has linear molecular weight. One such gas species is hydrogen.--

In the Claims

Please amend claims 1, 2, 26, 28, 29, and 31-40, as follows.

1. (first amendment) A gas centrifuge means operating to separate gases of differing chemical composition and molecular weight by a centrifugal force field[.], there being vanes associated with said centrifuge means to receive and pass a flowing stream of liquid associated with said gases, with turbine effect.

2. (first amendment) A gas processing system including a gas centrifuge means operating to separate carbon dioxide from methane by a centrifugal force field[.], and means to inject a treatment fluid into said system for purposes of gas treatment.

26. (first amendment) [The] A method that includes

a) providing a [rotary centrifuge to receive] a mixture of gases having carbon dioxide and/or other heavy gases and methane components, and also providing a rotary centrifuge,

b) operating the rotary centrifuge to separate said components into separate streams,

c) using the separated stream of carbon dioxide and methane to produce torque acting to aid rotation of the centrifuge.

28. (first amendment) The method that includes

a) providing a rotary centrifuge to receive a mixture of gases having carbon dioxide and/or other heavy gases and methane components,

b) operating the rotary centrifuge to separate said components into separate streams,

c) using the separated streams of carbon dioxide and methane to produce torque acting to aid rotation of the centrifuge,

d) [The method of claim 27] and including providing vanes in the centrifuge to receive and pass

[the] a flowing fluid stream, associated with said mixture, with turbine effect.

29. (first amendment) A centrifugal gas processing system comprising:

a) a centrifugal means to separate free liquids from gas, light liquids from heavy liquids, and solids from liquids,

b) a centrifugal means to extract liquids from said [a)] gas by lowering the pressure and temperature and separating the formed liquids from the gas,

c) a centrifugal means to process said [a)] gas thereby to separate heavy gases from light gases[.],

d there being vanes associated with at least one of said centrifugal means to receive and pass a flowing fluid stream with turbine effect.

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31. (first amendment) A centrifugal gas processing system comprising:

- a) a centrifugal means to separate free liquids from gas, light liquids from heavy liquids, and solids from liquids,
- b) a centrifugal means to extract liquids from said a) gas by lowering the pressure and temperature and separating the formed liquids from the gas[.],
- c) there being vanes connected with at least one of said centrifugal means to receive a flowing stream of liquid, with turbine effect.

32. (first amendment) A centrifugal gas processing system comprising in combination:

- [b]a) a centrifugal means to extract liquids from gas by lowering the pressure and temperature and separating the formed liquids from the gas,
- [c]b) a centrifugal means to process said gas thereby to separate heavy gases from light gases[.],
- c) and means to inject a treatment liquid into said system for purposes of gas processing.

33. (first amendment) A centrifugal gas processing system, comprising:

- a) a centrifugal means to separate free liquids from gas, light liquids from heavy liquids, and solids from liquids,
- b) a centrifugal means to process said [a)] gas thereby to separate heavy gases from light gases[.],
- c) and means to inject a treatment liquid into said system for purposes of gas processing.

34. (first amendment) A centrifugal gas processing system comprising in combination:

- a) a centrifugal means to extract liquids from gas by lowering the pressure and temperature and separating the formed liquids from the gas,
- b) a centrifugal means to process said gas thereby to separate heavy gases from light gases,
- c) [The combination of claim 32 together with] and including means to inject a treatment liquid into said system for purposes of gas treatment.

35. (first amendment) A gas processing system comprising

- a) a centrifugal means to extract liquids from gas by lowering the pressure and temperature and separating the formed liquids from the gas,
- b) means to inject a treatment liquid into said system for purposes of gas treatment[.],
- c) there being vanes in said centrifugal means to receive and pass a flowing stream of said liquid, with turbine effect.

36. (first amendment) A gas centrifuge means to receive a fluid stream and operating to separate carbon dioxide from [one of the following:

- i) a gas or gases lighter than carbon dioxide
- ii) a hydrogen containing gas.]

another gas, there being vanes associated with said centrifuge means to receive the fluid stream, with turbine effect, and there being means to inject a treatment fluid to flow into the centrifuge means for purposes of fluid treatment.

Serial No. 10/087,917

37. (first amendment) The combination of
claim 5 wherein the heavier gas stream consists
essentially of carbon dioxide and the lighter gas
stream consists of [a hydrogen content] another gas.

38. (first amendment) The combination of
claim 6 wherein the heavier gas stream consists
essentially of carbon dioxide and the lighter gas
stream consists of [a hydrogen content] another gas.

39. (first amendment) The combination of
claim 7 wherein the heavier gas stream consists
essentially of carbon dioxide and the lighter gas
stream consists of [a hydrogen content] another gas.

40. (first amendment) The combination of
claim 37 wherein the heavier gas stream consists of
carbon dioxide, and the lighter gas stream consists of
[one of the following:

- i) methane,